

Atty Docket No.: JCLA8066

Serial No.: 10/065,380

In The Claims:

1. (Currently Amended) A unit cell in a liquid crystal display device, the unit cell comprising:

a first capacitor electrode on a substrate;

a capacitor dielectric layer on the first capacitor electrode, wherein the capacitor dielectric layer completely covers the first capacitor electrode and is in physical contact with the entire first capacitor electrode;

a second capacitor electrode on the capacitor dielectric layer, wherein the second capacitor electrode has a surface area smaller than the first capacitor electrode, to prevent overlapping with edges of the first capacitor electrode;

a passivation layer on the second capacitor electrode, wherein the passivation layer has an opening that exposes a portion of the second capacitor electrode; and

a pixel electrode layer on the passivation layer such that the pixel electrode layer and the second capacitor electrode are electrically connected through the opening in the passivation layer.

2. (Previously Amended) The unit cell of claim 1, wherein an overlapping region between the first capacitor electrode and the second capacitor electrode is substantially equal to the surface area of the second capacitor electrode.

3. (Previously Amended) The unit cell of claim 1, wherein the pixel electrode is further connected to a switching element.

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4. (Previously Amended) The unit cell of claim 1, wherein the pixel electrode is further connected to a thin film transistor.

5. (Previously Amended) The unit cell of claim 1, wherein the first capacitor electrode is further connected to a common voltage.

6. (Currently Amended) A storage capacitor structure in a unit cell of a liquid crystal display device, the storage capacitor structure comprising:

a first capacitor electrode on a substrate;

a capacitor dielectric layer on the substrate, wherein the capacitor dielectric layer completely covers the first capacitor electrode and is in physical contact with the entire first capacitor electrode; and

a second capacitor electrode on the capacitor dielectric layer, wherein the edges of the second capacitor electrode are bounded within the edges of the first capacitor electrode.

Claim 7 (canceled)

8. (Currently Amended) The capacitor structure of claim 6, wherein when a residual conductive material is distributed along the edges of the first capacitor electrode, the residual conductive material will not come in contact with the edges of the second capacitor electrode so

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that an electrical short between the second capacitor electrode and a neighboring ~~scan~~ signal line can be prevented.

Claims 9-15 (canceled)

16. (Currently Amended) A liquid crystal display device, comprising:

a plurality of scan lines;

a plurality of signal lines; and

a plurality of pixels each including a liquid crystal cell having a pixel electrode connected to a storage capacitor and a switching element connected between the liquid crystal cell and one of the signal lines, a gate of the switching element being connected to one of the scan lines;

wherein a first capacitor electrode, a capacitor dielectric layer and a second capacitor electrode together form the storage capacitor, and wherein the capacitor dielectric layer completely covers the first capacitor electrode and is in physical contact with the entire first capacitor electrode and an area of the second capacitor electrode is smaller than an area of the first capacitor electrode so that edges of the second electrode do not overlap with edges of the first capacitor electrode.

17. (Currently Amended) A storage capacitor for holding a voltage provided from a signal line of a liquid crystal device within a predetermined interval, the storage capacitor comprising:

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a first capacitor electrode disposed on a substrate of the liquid crystal device; a
capacitor dielectric layer on the substrate, wherein the capacitor dielectric layer completely
covers the first capacitor electrode and is in physical contact with the entire first capacitor
electrode;

a second capacitor electrode disposed substantially over the first capacitor electrode
electrically connected to a pixel electrode;

wherein an area of the second capacitor electrode normally projected on the plane of the
first capacitor electrode is substantially bounded within an area of the first capacitor electrode so
as to prevent electrical short between the second capacitor electrode and the signal line.

18. (Currently Amended) A storage capacitor for holding a voltage provided from a signal
line of a liquid crystal device within a predetermined interval, the storage capacitor comprising:

a first capacitor electrode disposed on a substrate of the liquid crystal device and having a
first area with respect to a plan view of the first capacitor electrode;

a second capacitor electrode disposed substantially over the first capacitor electrode and
having a second area with respect to a plan view of the second capacitor electrode; and

dielectric means laminated between the first capacitor electrode and the second capacitor
electrode, wherein the dielectric means comprises a capacitor dielectric layer that completely covers
the first capacitor electrode and is in physical contact with the entire first capacitor electrode;

wherein the second area of the second capacitor electrode, with respect to the plan view
thereof, is substantially within the first area of the first capacitor electrode.